Complete Summary

GUIDELINE TITLE

Multiple gestation: complicated twin, triplet, and high-order multifetal pregnancy.

BIBLIOGRAPHIC SOURCE(S)

American College of Obstetricians and Gynecologists (ACOG). Multiple gestation: complicated twin, triplet, and high-order multifetal pregnancy. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2004 Oct. 15 p. (ACOG practice bulletin; no. 56). [141 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Multifetal gestation and related morbidity, including:

- Gestational diabetes
- Gestational hypertension
- Preeclampsia
- Hemolysis, elevated liver enzymes, and low platelets [HELLP] syndrome

GUIDELINE CATEGORY

Management

CLINICAL SPECIALTY

Obstetrics and Gynecology
Pediatrics
Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To aid practitioners in making decisions about appropriate obstetric and gynecologic care
- To address the risks associated with multifetal pregnancies and present an evidence-based approach to management of multifetal pregnancies, when possible

TARGET POPULATION

Women with multifetal pregnancy (twins, triplets, etc.)

INTERVENTIONS AND PRACTICES CONSIDERED

1. Screening and monitoring for maternal morbidity
2. Prediction of preterm delivery (endovaginal ultrasonography, digital examination, fetal fibronectin, home uterine activity monitoring)
3. Prolongation of gestation (prophylactic cerclage, hospitalization, restriction of activity and rest at home) – not recommended prophylactically
4. Management of preterm labor (prophylactic tocolytics [beta-mimetics], corticosteroids)
5. Diagnosis and management of growth restriction or discordant growth
6. Management of spontaneous fetal death in utero
7. Antepartum fetal surveillance
8. Management of delayed delivery of a second twin
9. Management of problems from monochorionic placentation (twin-twin transfusion syndrome, acardiac or acephalus twin, and conjoined twins)
10. Timing of delivery
11. Route of delivery (vaginal versus cesarean)

MAJOR OUTCOMES CONSIDERED

- Rate of infant morbidity
- Rate of maternal morbidity
- Infant and maternal mortality
- Duration of infant hospitalization

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The MEDLINE database, the Cochrane Library, and the American College of Obstetricians and Gynecologists' own internal resources and documents were used to conduct a literature search to locate relevant articles published between January 1985 and March 2004. The search was restricted to articles published in the English language. Priority was given to articles reporting results of original research, although review articles and commentaries also were consulted. Abstracts of research presented at symposia and scientific conferences were not considered adequate for inclusion in this document. Guidelines published by organizations or institutions such as the National Institutes of Health and the American College of Obstetricians and Gynecologists were reviewed, and additional studies were located by reviewing bibliographies of identified articles.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Studies were reviewed and evaluated for quality according to the method outlined by the U.S. Preventive Services Task Force:

I: Evidence obtained from at least one properly designed randomized controlled trial.

II-1: Evidence obtained from well-designed controlled trials without randomization.

II-2: Evidence obtained from well-designed cohort or case–control analytic studies, preferably from more than one center or research group.

II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Analysis of available evidence was given priority in formulating recommendations. When reliable research was not available, expert opinions from obstetrician–gynecologists were used. See also the "Rating Scheme for the Strength of Recommendations" field regarding Grade C recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Based on the highest level of evidence found in the data, recommendations are provided and graded according to the following categories:

Level A — Recommendations are based on good and consistent scientific evidence.

Level B — Recommendations are based on limited or inconsistent scientific evidence.

Level C — Recommendations are based primarily on consensus and expert opinion.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Practice Bulletins are validated by two internal clinical review panels composed of practicing obstetrician-gynecologists generalists and sub-specialists. The final guidelines are also reviewed and approved by the American College of Obstetricians and Gynecologists (ACOG) Executive Board.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The grades of evidence (I-III) and levels of recommendation (A-C) are defined at the end of the "Major Recommendations" field.

The following recommendations are based on limited or inconsistent scientific evidence (Level B):

- Tocolytic agents should be used judiciously in multiple gestations.
- Women with high-order multiple gestations should be queried about nausea, epigastric pain, and other unusual third-trimester symptoms because they are at increased risk to develop hemolysis, elevated liver enzymes, and low platelets (HELLP) syndrome, in many cases before symptoms of preeclampsia have appeared.
- The higher incidence of gestational diabetes and hypertension in high-order multiple gestations warrants screening and monitoring for these complications.

The following recommendations are based primarily on consensus and expert opinion (Level C):

- The National Institutes of Health recommends that women in preterm labor with no contraindication to steroid use be given one course of steroids, regardless of the number of fetuses.
- Cerclage, hospitalization, bed rest, or home uterine activity monitoring have not been studied in high-order multiple gestations, and, therefore, should not be ordered prophylactically. There currently is no evidence that their prophylactic use improves outcome in these pregnancies.
- Because the risks of invasive prenatal diagnosis procedures, such as amniocentesis and chorionic villus sampling, are inversely proportional to the experience of the operator, only experienced clinicians should perform these procedures in high-order multiple gestations.
- Women should be counseled about the risks of high-order multiple gestation before beginning assisted reproductive technology (ART).
- Management of discordant growth restriction or death of one fetus in a high-order multiple gestation should be individualized, taking into consideration the welfare of the other fetus(es).

Definitions:

Grades of Evidence

I: Evidence obtained from at least one properly designed randomized controlled trial.

II-1: Evidence obtained from well-designed controlled trials without randomization.

II-2: Evidence obtained from well-designed cohort or case–control analytic studies, preferably from more than one center or research group.

II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Levels of Recommendations

Level A — Recommendations are based on good and consistent scientific evidence.

Level B — Recommendations are based on limited or inconsistent scientific evidence.

Level C — Recommendations are based primarily on consensus and expert opinion.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Reduced maternal and fetal morbidity and mortality

POTENTIAL HARMS

The risks associated with tocolytics are amplified in multiple gestations. Beta-mimetics are associated with increased maternal and fetal cardiac stress and gestational diabetes; these complications occur more frequently in multiple gestations even without beta-mimetic therapy. In addition, women with multiple gestations are at increased risk of developing pulmonary edema resulting in severe respiratory distress when tocolytic agents, steroids, and intravenous fluid are administered together.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

These guidelines should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Foreign Language Translations
Patient Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2004 Oct

GUIDELINE DEVELOPER(S)

American College of Obstetricians and Gynecologists - Medical Specialty Society

SOURCE(S) OF FUNDING

American College of Obstetricians and Gynecologists (ACOG)

GUIDELINE COMMITTEE

American College of Obstetricians and Gynecologists (ACOG) Committee on Practice Bulletins-Obstetrics

Society for Maternal-Fetal Medicine

American College of Obstetricians and Gynecologists (ACOG) Joint Editorial Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: None available

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 4500, Kearneysville, WV 25430-4500; telephone, 800-762-2264, ext. 192; e-mail: sales@acog.org. The ACOG Bookstore is available online at the ACOG Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following is available:

- Having twins. Atlanta (GA): American College of Obstetricians and Gynecologists (ACOG); 2004.

Electronic copies: Available from the American College of Obstetricians and Gynecologists (ACOG) Web site. Copies are also available in Spanish.

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 4500, Kearneysville, WV 25430-4500; telephone, 800-762-2264, ext. 192; e-mail: sales@acog.org. The ACOG Bookstore is available online at the ACOG Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI Institute on October 10, 2007. The information was verified by the guideline developer on December 3, 2007.

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